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New York State Department of Environmental Conservation
Division of Fish, Wildlife and Marine Resources
Wildlife Pathology Unit
108 Game Farm Road, Delmar, NY 12054

Erin Crotty
Commissioner

Personal privacy information

M E M O R A N D U M

TO: Jim Eckler

FROM: Ward Stone

Monroe Co.

SUBJECT: Three Gray Squirrels (01-56-12A-C) from Churchville, New York Dying of the Anticoagulant Rodenticide Brodifacoum in 1993

DATE: February 25, 2002

I'll bet that [redacted] will be surprised by these results, since the better part of a decade has past since she submitted the squirrels.

History: Two of these gray squirrels died in the front yard (June 14, 1993) and a third died on June 23, 1993. [redacted] picked up the squirrels and wrote the history. It was suspected that lawn chemicals or a neighbor that feeds birds might have purposely poisoned the squirrels. The squirrels were in good shape and had obviously remained frozen when they arrived at the Wildlife Pathology Unit for diagnosis on December 19, 2001.

Findings: The gray squirrels were an adult female and a juvenile male and female. The adult had a gross weight of 52 Kg, the juvenile male 0.29 Kg and the juvenile female .32 Kg. The adult female had recently been lactating. The skeletal muscles were pale. The results of the coagulopathies were also seen in lung hemorrhages in the juveniles and bloody fluid in the stomach of the adult and one of the juveniles. There was a obvious lack of blood in the circulatory system of the adult. At the end of the necropsies, of these long-dead squirrels, a presumptive diagnosis of anticoagulant rodenticide poisoning wae made. A pool of liver samples (equal size pieces) was made for toxicology.

Toxicology (See attached laboratory report(s) from the Illinois Department of Agriculture, Bureau of Animal Disease Laboratory, Centralia, Illinois): A high level of Brodifacoum (5.1 ppm) was found in the squirrel's liver pool.

Diagnosis: Squirrels killed by hemorrhaging caused by the anticoagulant rodenticide Brodifacoum.

ISB need
3/15/2002

Comments: Fortunately, the cause of death is no longer a mystery. However, the why of it still is unknown.

This case is also interesting because it shows that Brodifacoum can hold up for many years in frozen tissues.

Wildlife Pathologist

WBS:rd
cc: N. Mastrota
Toxicant Binder

Diagnostic findings may not be used for publication without the pathologist's knowledge and consent.

Illinois Department of Agriculture

GEORGE H. RYAN, GOVERNOR
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TOXICOLOGY DEPARTMENT REPORT

VETERINARIAN

NEW YORK WILDLIFE
108 GAME FARM RD
DELMAR NY 12054

OWNER

NEW YORK WILDLIFE
01-56-12A-C

ACCESSION NUMBER: 2002008753
DATE REPORTED: 02/05/2002
DATE RECEIVED: 01/28/2002

SPECIMEN RECEIVED: 01-56-12A-C GRAY SQUIRREL POOLED LIVER
SPECIES:
TEST REQUESTED: ANTICOGULANT/RODENTICIDE SCREEN
RESULTS:

ANTICOAGULANTS
BRODIFACOUM - 5.1 ppm
ALL OTHER ANTICOAGULANTS - NONE DETECTED

THE FOLLOWING TOXINS ARE INCLUDED IN THE ANTICOAGULANT SCREEN

Fumarin	Valone
Racumin	Chlorophacinone
Warfarin	Bromadiolone
Coumachlor	4-OH Warfarin
Difenacoum	6-OH Warfarin
Brodifacoum	7-OH Warfarin
Diphacinone	8-OH Warfarin
Pindone	Difethialone

CHEMIST

APPROVED

LABORATORY SUPERVISOR Steve Kaster RC